

Remarks

Reconsideration of this application as amended is respectfully requested.

Claims 23-27 stand rejected under 35 U.S.C. § 102(e) as being unpatentable over U.S. Patent No. 5,956,267 of *Hurst et al.* ("*Hurst*").

Claims 28-33 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over *Hurst* in view of U.S. Patent No. 5,748,524 of *Chen et al.* ("*Chen*").

The Examiner has rejected claims 23-27 under 35 U.S.C. § 102(e) as being anticipated by *Hurst*. Applicant respectfully submits, however, that claim 23 is not anticipated by *Hurst*. Claim 23 is a magnetic memory that includes the limitations

array of magnetic memory cells each having a sense layer for storing a magnetization state;
structure that runs continuously along a subset of the magnetic memory cells in a line of the array, the structure having a U-shape and a proximity to the sense layers in the line which provides a flux closure path that directs demagnetization fields away from a pair of edge regions of each sense layer in the line, the structure having an easy axis that is substantially perpendicular to an easy axis of each sense layer in the line.

(Claim 23, emphasis added).

Hurst does not disclose a magnetic memory with a structure having a proximity to sense layers which provides a flux closure path that directs demagnetization fields away from a pair of edge regions of each sense layer as claimed in claim 23. Instead, *Hurst* discloses a keeper structure 30 that is isolated from a bit region 70 by a dielectric layer 60. (See Figs 7-8 of *Hurst*). In further contrast, *Hurst* discloses a keeper structure that enhances write fields (see Figs 16-17 and col. 7, lines 5-24 of *Hurst*) rather than a structure that directs demagnetization fields away from sense layers as claimed in claim 23.

The Examiner has stated that the keeper structure

disclosed by *Hurst*

necessarily directs demagnetization fields away from a pair edge regions of each sense layer in the line because Applicant's specification indicates that this is how.

(Page 3, Office Action, 2-10-02) (emphasis added).

Applicant submits that the Examiner is impermissibly attempting to use applicant's own detailed description of applicant's own invention as if it were prior art to applicant's own invention as claimed in claim 23.

Moreover, Applicant respectfully submits that *Hurst* does not teach that its keeper structure has a proximity to sense layers as claimed in claim 23 but instead discloses a keeper that is isolated from a bit region by a dielectric layer. (See Figs 7-8 of *Hurst*).

Furthermore, *Hurst* does not disclose a magnetic memory with a structure having an easy axis that is substantially perpendicular to an easy axis of sense layers as claimed in claim 23. The Examiner has acknowledged the lack of such disclosure in *Hurst* by stating that

[*Hurst*] discloses all of the limitations of the claims except for (1) perhaps expressly stating that the easy axis of the stabilizing structure is substantially perpendicular to the easy axis of the sense layer;

(Page 4, Office Action, 2-10-02) (emphasis added).

The Examiner argues that since the magnetic flux direction shown in Figure 16 of *Hurst* occurs only during the application of a write current that

it is clear that the alignment is **not** as shown in it the absence of the current, which means "substantially perpendicular"..

(Page 3, Office Action, 2-10-02) (emphasis original).

Even assuming that these unsupported conclusions regarding flux orientations are true, it still does not anticipate the substantially perpendicular orientations of the easy axis of the structure to the easy axis of each sense layer as claimed in claim 23.

It is therefore submitted that the structure of claim 23 having a proximity and shape that directs demagnetization fields away from sense layers and that has an easy axis that is substantially perpendicular to the easy axes of the sense layers is not anticipated by *Hurst*.

Given that claims 24-33 depend from claim 23, it is submitted that claims 24-33 are not anticipated by *Hurst*.

The Examiner has stated with respect to the rejection of claim 23-27 under 35 U.S.C. § 102(e) that it is noted that WO 00/42324 (based on US patent application 09/318,073 with priority date 5/25/99 as provided in Applicant's IDS of 5/15/01) assigned to the same assignee as the *Hurst* patent, discloses that...

(Pages 3-4, Office Action, 2-10-02) (emphasis omitted).

Applicant submits that the Examiner is actually referring to international publication WO 00/72324. Applicant submits that international publication WO 00/72324 does not qualify as prior art under 35 U.S.C. § 102 because it has an international filing date of 5-24-2000 which is after the filing date of the patent application from which claims 23-27 are derived. (See MPEP §1857.01).

It is not clear why the Examiner has referred to WO 00/72324. Claims 23-27 now stand rejected under 35 U.S.C. § 102(e) as being unpatentable in view of *Hurst*. If the Examiner believes that WO 00/72324 qualifies as prior art under 35 U.S.C. § 102 then the Examiner should formulate a rejection on that basis. As it stands now, *Hurst* provides the only basis for rejection of claim 23 under 35 U.S.C. § 102 and it is submitted that applicant has overcome that rejection.

The Examiner has rejected claims 28-33 under 35 U.S.C. § 103(a) as being obvious in view of *Hurst* and *Chen*. Claims 28-33 depend from claim 23 which as shown above is not anticipated by *Hurst* because *Hurst* does not

disclose the structure of claim 23 having a proximity and shape that directs demagnetization fields away from sense layers and that has an easy axis that is substantially perpendicular to the easy axes of the sense layers.

Chen discloses a memory cell 20 having a separated pinning material 30 disposed on each edge of a memory cell 20 (see Figs 5 and 6 of *Chen*). It is submitted that the disconnected pinning material 30 does not provide a flux closure path that directs demagnetization fields away from sense layers as claimed in claim 23.

It is respectfully submitted that any combination of *Hurst* and *Chen* would still lack the limitation of a structure with a proximity to a sense layer that directs demagnetization fields away from a sense layer as claimed in claim 23.

Given that claims 28-33 depend from claim 23, it is submitted that claims 28-33 are not obvious in view of *Hurst* and *Chen*.

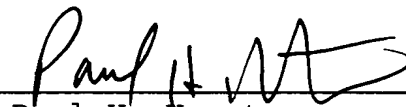
It is respectfully submitted that in view of the amendments and arguments set forth above, the applicable objections and rejections have been overcome.

The Commissioner is authorized to charge any underpayment or credit any overpayment to Deposit Account No. 08-2025 for any matter in connection with this response, including any fee for extension of time, which may be required.

Respectfully submitted,

Date: 5-13-02

By: _____



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